2012

MCOM VEHICLE TRACKING SYSTEM

Vehicle Tracking System allows the Department to track, trace and monitor their vehicles in real time using GSM / GPRS technology. It sends the location address, Ignition status, Fuel status, Battery Power status and AC ON/OFF Status to a central server at every 10 seconds . It also sends alerts to the computer or to a mobile phone whenever an exceptional event has occurred such as erratic vehicle movements, excessive speeding ,changes in fuel level etc.

MCOM VTS MANUAL

Thank you for using our product

- We keep the final explanation right on this User Guide.
- Please don't unfold or maintain it, for fear damaging it, if you don't operate it according to the user's manual, it may damage the product or cause hurt to you, our company would not take responsibility for the loss in this situation.
- Our tracking devices may not be used to violate the privacy rights of others, or in violation of local, county, state or federal statutes, and our company will not be responsible for inappropriate use of these products.
- VTS is a device that uses the Global Positioning System to determine the precise location of a vehicle, moving house, trailer or other asset in which VTS is installed on and to record the position of the VTS regular intervals. With GPS systems, it records not only position, but also velocity, Date time, direction, status of digital output ports, etc.
- The main purpose of using VTS not only to locate the vehicles, but also to obtain information about the status of doors, windows and ignition, etc. Or remotely monitor cutting off gas and power supply, etc.
- Sometimes, if users want to upgrade the VTS version, then we will give users new software firmware to update it. In this situation, please contact our service center.
- In order to acquire more important details, you should pay much attention to some signs and supplementary information, such as:

Note: Means you must pay much attention, it includes many important details which you may overlook.

Caution: Warning information on relative topic, you should read it carefully, to avoid unexpected loss.

More information: More relative information about a certain topic, sometimes it is another easy way for the same purpose. And if some words are marked in red color, that indicates the words should be paid much more attention.

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FEATURE

- Vehicle Tracking system combines Internet technology, GPS and terrestrial networks such as GSM / GPRS

- The device fitted in the vehicle has a built in GPS receiver determines the vehicle location, traveling speed, direction etc.

- Device also send ignition on/off ,fuel ,AC to server.

- The device sends the data via GSM / GPRS wireless network to the Vehicle Tracking Application

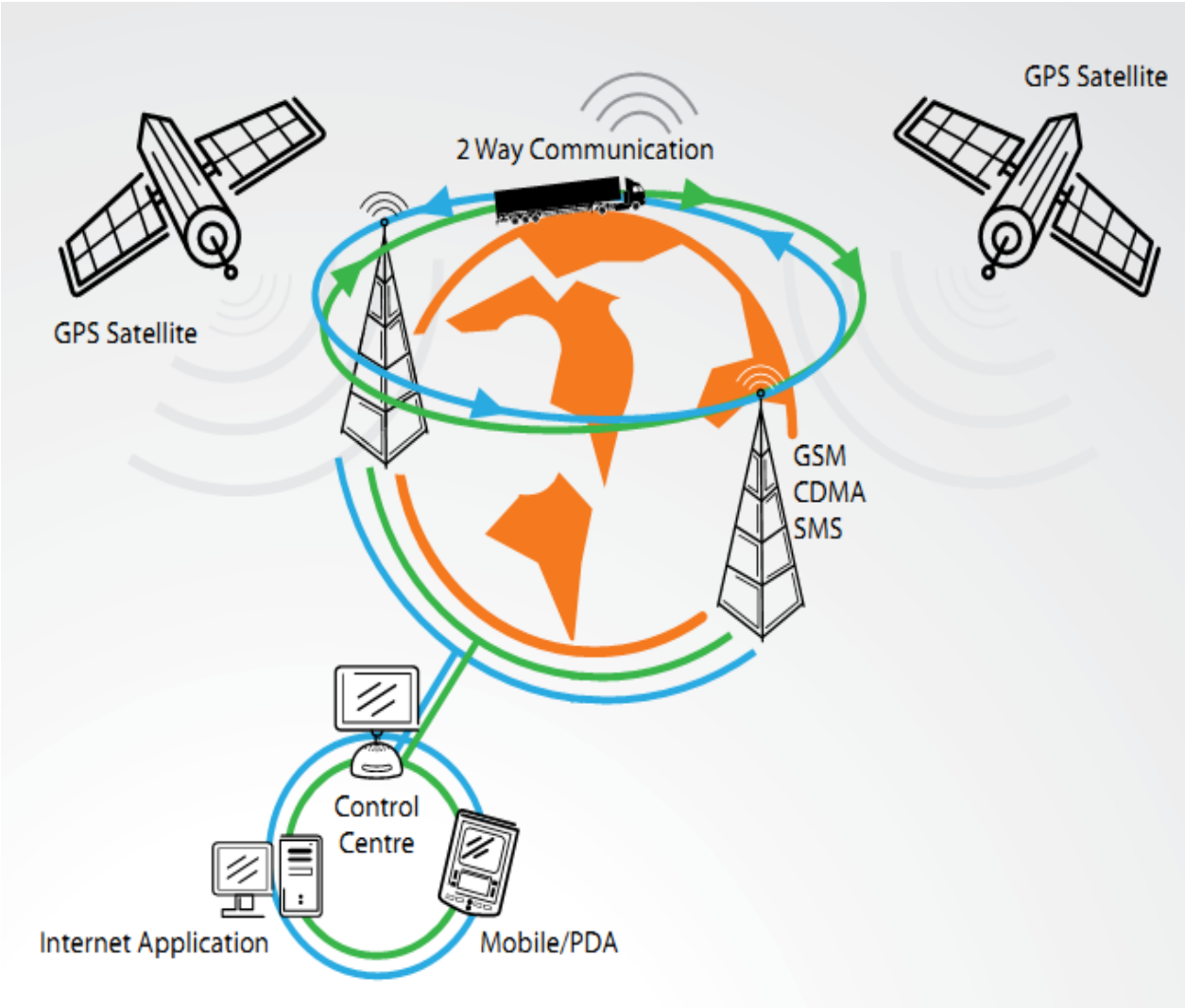
- If there is no network coverage, the data is stored locally and sends when the network is established.

- If there is any one misbehave with device such as cutting power of device it will provide alert of this with location for 10 hours on inbuilt battery supply.

- The GPS data sent by the device is stored in a secured database of Vehicle Tracking application

- Managers can generate reports of travel distance, running duration ,stoppage duration , fuel status , analyze data, replay the route travelled by the vehicle on a map for efficient management of vehicles.

How vts communicate with the GPS satellite



Location information of the vehicle is received by the device from the GPS Satellites. The device sends the location information through GPRS to Server. The Control Center receives the location information, processes data and provides information. The control station software plots the vehicle's location on the map. The infrastructure enables communication to vehicle in Real Time.

Accessories

VEHICLE TRACKING UNIT

Accessories	Yes or No
Cable	✓
GSM Antenna	✓
GPS Antenna	✓
Fuel sensor	✓ (Optional)
User Manual	✓

Specification:-

1. Power Supply 12 – 30V.
2. Rechargeable Backup Battery.
3. Sufficient number of LEDs.
4. Antennas: GPS & GSM antennas.
5. RS232 serial interfaces.
6. GSM/GPRS: Unit shall have quad-band GSM/GPRS module with EDGE capability which can operate in the 850 MHz and 1900 MHz band.

PRODUCT SPECIFICATIONS

Frequency Band: 850/1900 MHz

Transmit Power: 33 dBm @ 850 MHz

GPS SPECIFICATIONS

Receiver: 22 channel (L1 Band)

Receiver Sensitivity: -160 dBm

Accuracy: +/- 2.5m CEP

Cold Start: <35 sec

Hot Start: <1 sec

Network Functionality

Auto Register to GPRS network

GPRS multi-slot Class 10/8

Supports TCP, UDP and FTP

OTA Firmware Upgrade Using FTP

SMS connectivity

Power Requirement

D.C Power 10 – 30 V

GSM 850 80mA average @12V

GSM 1900 75mA average @12V

Physical Connection

RS232 Connector

GPS Antenna

GSM Antenna

Mechanical

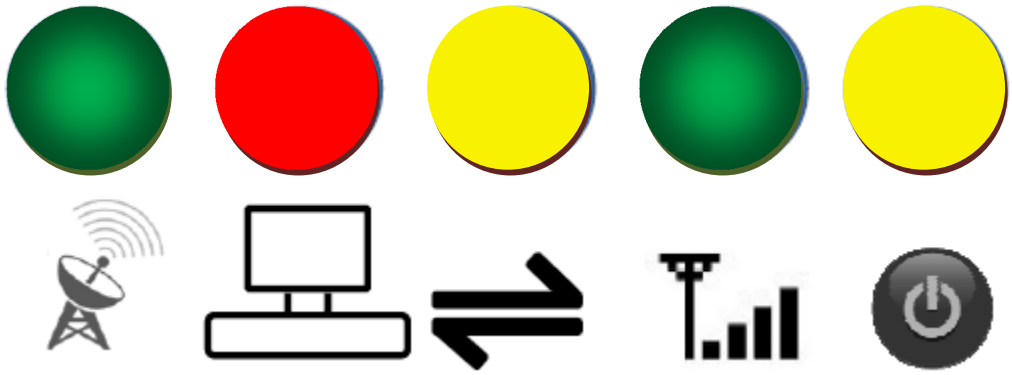
Case Material: Acrylic(Black)

Dimensions: 100 X 60 X 30 (mm)

Weight: 150 gm

Operating Temperature:-45°C to +100°C

Led Indicator:



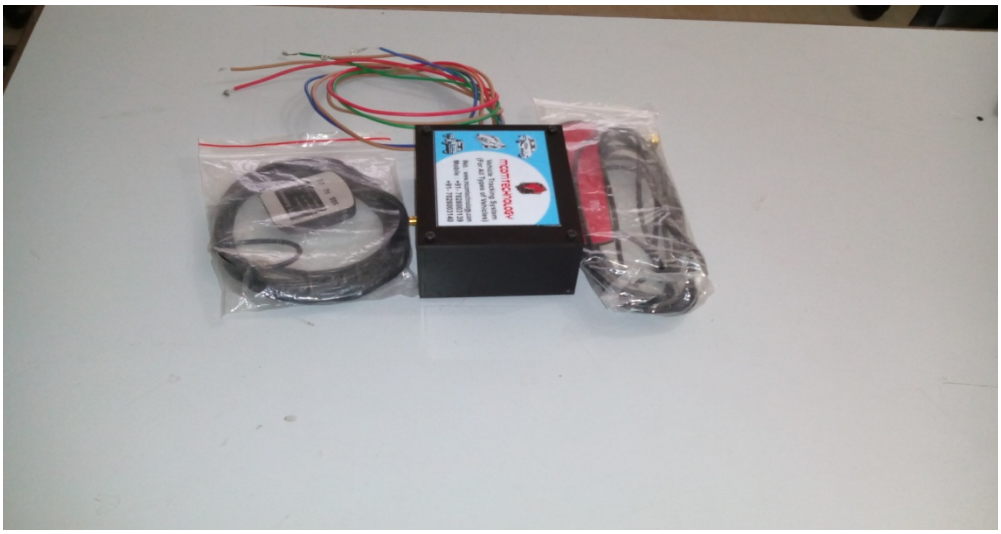
1. GPS 2. SERVER 3. GPRS 4. GSM 5. POWER

- First led (GREEN) indicate the GPS data from the satellite if led blinks then the GPS data is coming from the satellite and if it is stable then the VTS module is still searching for the GPS data.
- Second led (RED) indicates the connectivity of VTS module with the server .If led glows then connection between VTS & Server is successfully established otherwise connection is unsuccessful.
- Third led (YELLOW) indicate the GPRS connection status. If led glows then GPRS connection is active otherwise not active.
- Fourth led (GREEN) indicate the GSM coverage. If led blinks at fast rate then the GSM signal strength is weak and if it blinks slow then signal strength is good.
- Fifth led (YELLOW) indicate the power supply to the VTS.

Power supply:

1) The standard electric supply of this system is ranges from +12V to +30V DC voltage, with the red wires indicates positive and black wire negative. Do not make the positive wire (Red) use together with the following device:

- Storage battery



2) The Negative wire (Black) has to connect to the ground (negative terminal of battery). Do not connect it with other ground reference.

Installation Guide:

STEP1: Insert a SIM CARD

Note: Before inserting SIM card into VTS card holder, please make sure that SIM card is able to connect internet.

Step2: Connect GSM Antenna and GPS Antenna to VTS unit.

(1) Fasten the connection by turning the metal end of the antenna, until the connection is very firm.

Note: You'd better put GPS antenna top to the open sky, out of the car to get GPS signal, or make sure that it will not be covered or shielded by any electromagnetic object.

More information: VTS relies on GSM and GPS system for location and communication, so we must make sure that GSM signal and GPS signal are in good state.

- GSM is the abbreviation of **Global System for Mobile Communication**. At first, you should insert a sim card into the VTS, In virtue of GSM system.

- GPRS is **General Packet Radio Service**, is a service technique based on GSM, by virtue of the service, the VTS can communicate with a Server.

- GPS is the abbreviation of **Global Positioning System**. There are 24 positioning satellites around the earth sending GPS signal to the VTS. In order to receive signal, the top of GPS antenna cannot be shielded or covered by any electromagnetic object. The user should bring the top of GPS antenna to the open air for better GPS signal. If VTS is in a shielding environment temporary, please don't worry, because once the VTS leaves the shielding environment, it will regain GPS signal.

Step 3: Fix the VTS in your car and connect the VTS to the power of your car battery.

Caution: After you have completed all the process, we must check that the wiring connections are correct and firm and the joints are wrapped with insulating tape tightly.

KEY FEATURE

- **Online vehicle tracking,** we will provide you the software which gives you the exact location of the vehicle on map.
- **Track the vehicles from anywhere anytime**, through an internet connected device (PC, PDA etc) via a password protected web site.
- **Fuel Sensor**, to provide instant alerts for high and low temperatures in thermal sensitive cargo.
- **Run time vehicle operating status** such as Ignition on/off, current speed, accurate temperature reading etc are provided with every transmission
- **RS232 compatible.**
- **Led indicator:** led indicator for GPS data, server connect, gprs connect, gsm status, power key.
- **4 channel ADC**

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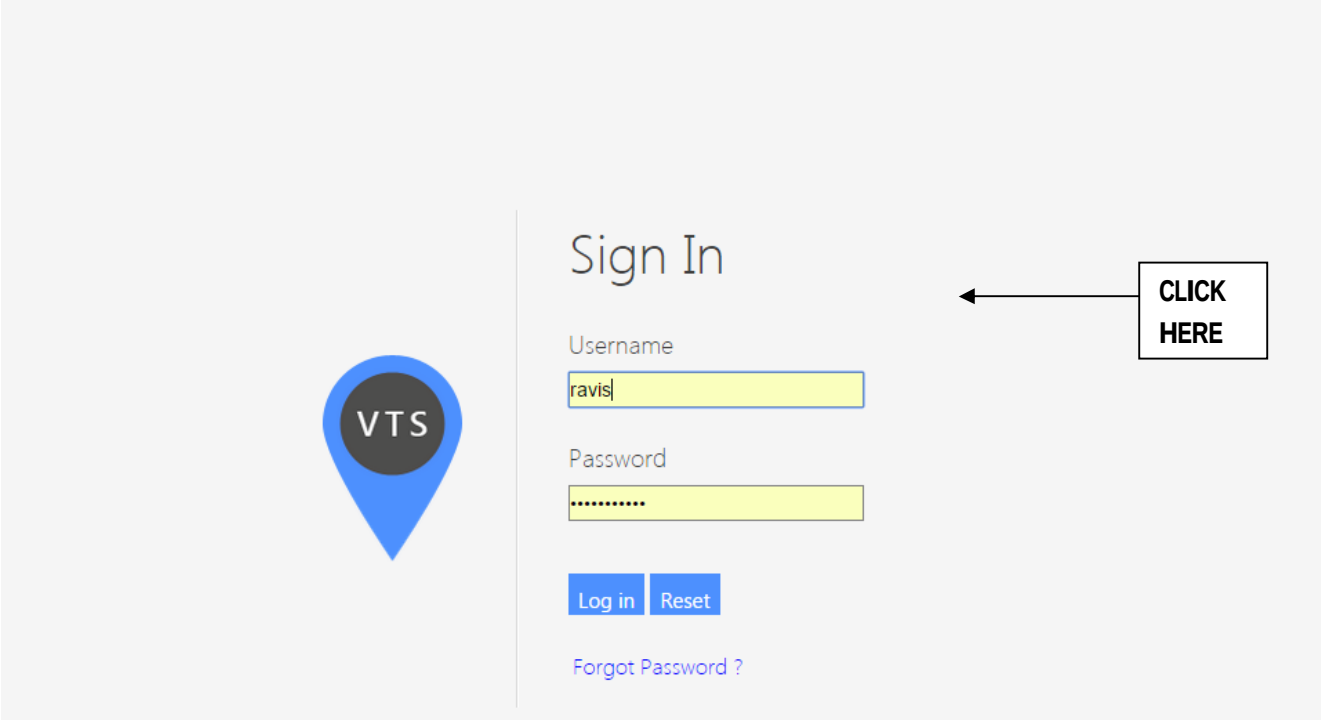
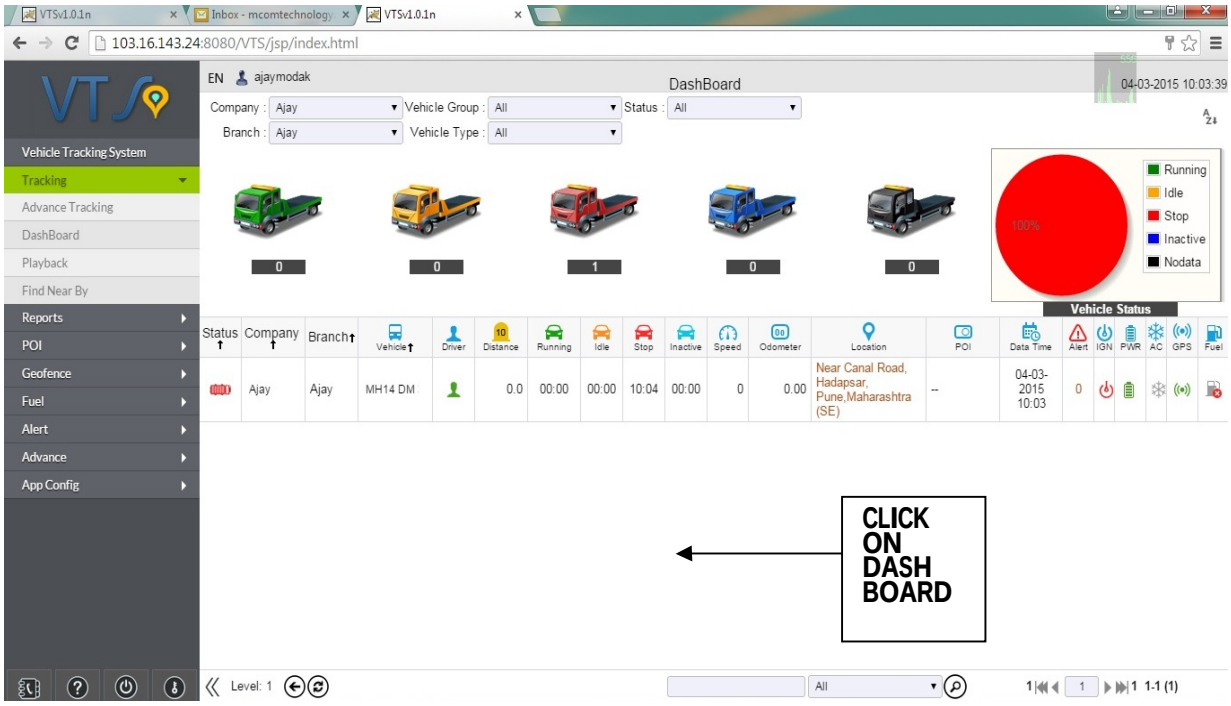


Start the browser (Google chrome , Mozilla , Internet explorer)

1. Open your browser type www.vts24.com in the address bar press enter.
2. Click on the login option in the Home page.



a. Height & Width.
b. ZoomIn & ZoomOut
c. Show Label
d. Vehicle Name
e. Vehicle ID
f. History
g. Geofence & Routing
h. Help
i. Logout
j. Vehicle Id's List
k. Map

a) **Height & Width**: This option is used to increase the height & width of Map.

b) **Zoom In & Zoom Out**: This option is used to increase & decrease zoom level of Map.

c) **Show Label**: When you click checkbox it will display the label of vehicle on the Map.

d) **Vehicle Name**: This option display the name of the vehicle on the left panel.

e) **Vehicle ID**: This option displays the vehicle id instead of vehicle name on the left panel.

f) **History** : When you click on history , it will display the following options

1) **Select Date**: from date TO date, this option displays ONLY ONE day data.

Select Date to see the history

Current Points:

a. Time wise in minutes.

b. Distance wise in kilometers.

Vehicle location on Digital Map

3) Start , Stop , Delay , Zoom , Step

4) Distance Tool. (Miles & Kilometers)

g) **Current**: This tab is default & you are in current data of your vehicle.

Fig No 4

a. Select the vehicle id from "**Select vehicle to trace**" list box in the left panel

b. Click on **Vehicle Name** in the left panel.

c. A **pop-up window** will display on the map.

d. A **vehicle alert table** will also add on the top of map.

Fig No 5

Pop-up Window: This window will display three options of vehicle.

SELECT OPTION FOR ZOOM IN /OUT.

neral: Contact No, Speed, Last Update Date, Vehicle Number, Vehicle

rameters: Date & Time, ADC1, ADC2, Tire Pressure, Oil Pressure, Night Driving, ADC6, Vehicle Temperature.

3) Zoom : When Click on this option it will display vehicle on Map in two ways

1. Using Map view
2. Using Satellite view

Instant alerts within seconds.

Vehicle Alert Table: This table will display following options.

1) GPS Status.
2) GPRS
3) ADC DATE
4) FUEL
5) TEMP HIGH
6) TEMP LOW

7) GPS DATE

8) GEOFENCE : GEO ID & DISTANCE

9) OVERSPEED

10) NIGHT DRIVE : START TIME & END TIME , MIN

11) STOPAGES : START TIME & END TIME , MIN

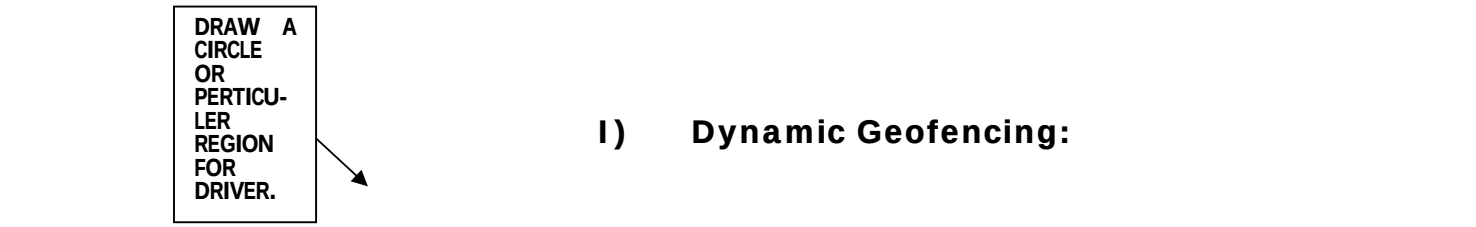
H) Geofence & Routing: This option is used “Geofence & Routing” for your vehicle

When you select this option it will display webpage like this (fig **no. 6**)

- Select vehicle Id to set your Goefence points
- Give the Geo ID
- Radius value
- Description
- Latitude value
- Longitude value
- Click on Add button

- To Draw circle on Map , click mouse point on Map

Fig No6



I) Dynamic Geofencing:

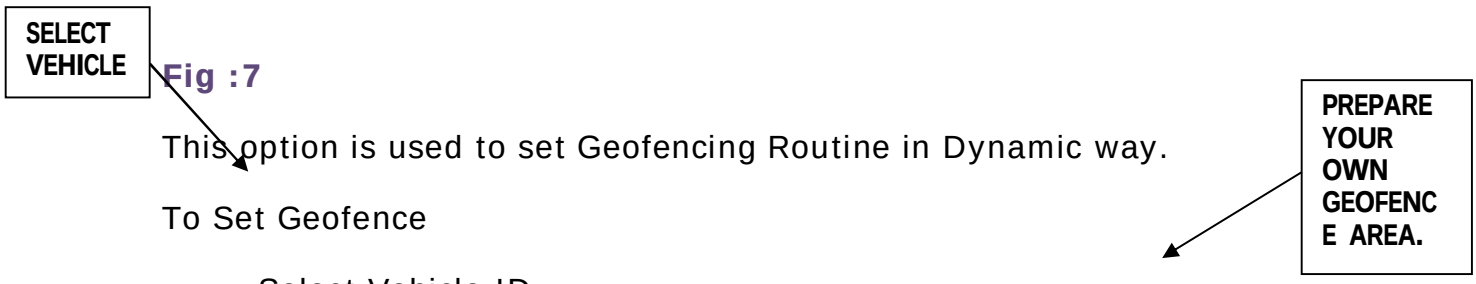


Fig :7

This option is used to set Geofencing Routine in Dynamic way.

To Set Geofence

- Select Vehicle ID
- Select FromDate to Todate
- Set Geofence ID
- Set Geofence Radius
- Give Description
- Set Latitude
- Set Longitude
- Click on Add button

J) Live Geopoint Status:

Fig No 8

This Option is used to see current position of Vehicles with Respect to Geofence.

FAQs

What is the tracking unit called?

Modern communication technology has only one model VTS.

What is the warranty on the hardware?

Modern communication technology will replace the system free of cost for any manufacturing defect within 1 year. However, in case MCOM VTS unit is tampered with or reinstalled without the services of a trained personnel, the warranty will cease to be valid.

What happens after the warranty?

A comprehensive annual maintenance contract can be taken for a fixed cost which covers preventive maintenance as well as components, with the exception of tampering.

What software do I require?

All you need is an internet connection and password for online connection. The password will be supplied by Modern communication technology.

Can I reinstall my hardware in another vehicle?

Absolutely Yes– Modern communication technology will reinstall the unit in another vehicle at a nominal cost.

How does the software enhance the benefit of my investment in GPS technology?

• **Provides Real Time Data -** On a continuous basis on location of the vehicle. This helps in planning, quicker turn around for cargo/ customer queries as to where the goods are. Better utilization of your asset means more revenues and more profit.

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• **Route Deviation -** If the Fleet is to deliver from Calcutta to Jamshedpur the route is set, then any deviation would trigger an alert to the management.

• **Work Timings -** What time the vehicle started/ where it went/ how much distance travelled/ what time your vehicle reached to your customer - everything is available in a report. You will never have to hear from the driver that he waited 5 hours to unload. You will have the power of the instant inform.

"MCOM Technology provides high end fully customized product to you which is designed with advance technologies through its quality innovation.

We believe in your satisfaction & hence our product is crafted with your requirement."